No. 163.

ABSTRACT OF THE PROCEEDINGS

OF THE

ZOOLOGICAL SOCIETY OF LONDON.*

February 6th, 1917.

Prof. E. W. MacBride, M.A., D.Sc., F.R.S., Vice-President, in the Chair.

The Minutes of the last Scientific Meeting were confirmed.

The Secretary read a Report on the Additions made to the Society's Menagerie during the months of November and December, 1916.

Mr. Edward Gerrard, on behalf of Mr. Crabb, exhibited a mounted specimen of a bird bred and reared in captivity under conditions in which it seemed certain that it was a hybrid between a male Thrush (*Turdus musicus*) and a female Blackbird (*Merula merula*).

Mr. L. A. Borradaile, M.A., F.Z.S., presented his memoir "On the Structure and Function of the Mouth-parts of the Palæmonid Prawns," and explained his conclusions by means of blackboard drawings, and also demonstrated the method of taking food, by means of living examples of prawns.

The Author regards the primitive crustacean limb as consisting of a flattened axis with a flabellum (exopodite), two or more epipodites, a series of eight endites, and an apical lobe, the flabellum standing opposite the third and fourth endites. He discussed the relation of the several jaws to this prototype.

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* This Abstract is published by the Society at its offices, Zoological Gardens, Regent's Park, N.W., on the Tuesday following the date of Meeting to which it refers. It will be issued, along with the 'Proceedings,' free of extra charge, to all Fellows who subscribe to the Publications; but it may be obtained on the day of publication at the price of *Sixpence*, or, if desired, sent post-free for the sum of *Six Shillings* per annum, payable in advance.

In the latter part of the paper he gave an account of some observations upon the use of the mouth-parts during feeding, in which he found the second maxillipeds, maxillules, and mandibles to play more important parts than the first maxillipeds and the maxillæ.

Prof. H. G. Plimmer, F.R.S., F.Z.S., Pathologist to the Society, read his Report on the Deaths which occurred in the Society's Gardens during 1916, and on the Blood-parasites found during the same period, and exhibited a series of lantern-slides showing the degenerative changes due to old age (sometimes premature) of animals that had lived under the conditions of captivity.

The next Meeting of the Society for Scientific Business will be held on Tuesday, February 20th, 1917, at 5.30 P.M., when the following communications will be made:—

C. J. C. Pool.

1. Notes from the Caird Insect House, with exhibition of specimens and lantern-slides.

2. The Coleoptera of the Family *Cissidæ* found in Britain, with Descriptions of two new Species. A new Species of the Coleopteran genus *Cryptorrhynchus* Illiger.

A. de C. Sowerby, F.Z.S.

On Heude's Collection of Pigs, Sika, Serows, and Gorals in the Sikawei Museum, Shanghai.

G. A. Boulenger, F.R.S., F.Z.S.

On the Lizards of the genus *Philochortus* Matschie.

The following Papers have been received :—

F. E. Beddard, D.Sc., M.A., F.R.S.

On the Scolex in the Cestode Genus *Duthiersia*, and on the Species of that Genus.

E. Phelps Allis, Junr., F.Z.S.

The Prechordal Portion of the Chondrocranium of *Chimœra colliei*.

The Publication Committee desire to call the attention of those who propose to offer Papers to the Society, to the great increase in the cost of paper and printing. This will render it necessary for the present that papers should be condensed, and be limited so far as possible to the description of new results.

Communications intended for the Scientific Meetings should be addressed to

P. CHALMERS MITCHELL,
Secretary.

Zoological Society of London,
Regent's Park, London, N.W.
February 13*th*, 1917.

No. 164.

ABSTRACT OF THE PROCEEDINGS

OF THE

ZOOLOGICAL SOCIETY OF LONDON.*

February 20th, 1917.

Dr. A. Smith Woodward, F.R.S., Vice-President, in the Chair.

The Minutes of the last Scientific Meeting were confirmed.

The Secretary read a Report on the Additions made to the Society's Menagerie during the month of January.

Mr. D. Seth-Smith, F.Z.S., Curator of Birds, exhibited the trachea from a male *Anseranas semipalmata*, showing its extraordinary convolution, which had been described by Latham as long ago as 1797. The exhibitor stated that neither in this species nor in *Phonygama keraudreni*, another species with a greatly developed convoluted trachea, did the birds produce any great volume of sound, such as might be expected from so elaborate an arrangement.

Mr. C. J. C. Pool, Assistant Curator of the Caird Insect House, exhibited a series of specimens and some lantern-slides of insects reared in the Insect House during 1916. Experiments showed that melanic variations of the Magpie Moth (*Abraxas grossulariata*) were not connected with melanic variations in the larva. In the case of Dragonflies, although the larvæ of several British species had been reared to maturity, it was found impossible under the conditions to feed the full-grown insects,

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which survived only a few days after emergence from the water. Similarly, it was found impossible to feed various species of Longicorn Coleoptera, although other beetles, differing as widely in diet as Carabidæ and Lamellicorns, fed readily on banana. Experimental feeding with beetles of the genus *Necrophorus*, showed that while these insects were refused by Meerkats (*Suricata*) they were eaten by a Mongoose and Capuchin Monkeys. Two examples of beetles, *Tetropium gabrieli* and *Donacia linearis*, exhibited interesting variations in the antennæ, the former having a supplementary short branch near the base of the right antenna and the latter ten instead of eleven joints to both antennæ.

Mr. C. J. C. Pool also read a paper on the Coleoptera of the family Cissidæ, describing two new species, and a second paper on a new species of *Cryptorrhynchus*.

A paper by Mr. A. de C. Sowerby, F.Z.S., on Heude's types of Artiodactyle Ungulates in the Sikawei Museum, China, was read. In the case of the species of *Sus*, *Cervus*, *Capricornis*, and *Nemorhœdus* it was shown that Heude had disregarded variations due to age, season, and other causes, and that in each of these genera the number of species must be greatly reduced.

Mr. G. A. Boulenger, F.R.S., F.Z.S., presented a paper on the Lizards of the genus *Philochortus* Matschie.

The next Meeting of the Society for Scientific Business will be held on Tuesday, March 6th, 1917, at 5.30 p.m., when the following communications will be made:—

R. I. Pocock, F.R.S., F.Z.S.

Exhibition of the work of the Beavers in the Society's Gardens.

F. E. Beddard, M.A., D.Sc., F.R.S., F.Z.S.

On the Scolex in the Cestode Genus *Duthiersia*, and on the Species of that Genus.

Capt. S. R. Douglas, M.R.C.S., L.R.C.P., I.M.S. (retired), F.Z.S.

An Experimental Investigation of the Migration of Woodcock breeding in the west of Ireland.

The following Papers have been received :—

E. Phelps Allis, Junr., F.Z.S.

The Prechordal Portion of the Chondrocranium of *Chimæra colliei*.

D. M. S. Watson, F.Z.S.

A Sketch-classification of the Pre-Jurassic Tetrapod Vertebrates.

The Publication Committee desire to call the attention of those who propose to offer Papers to the Society, to the great increase in the cost of paper and printing. This will render it necessary for the present that papers should be condensed, and be limited so far as possible to the description of new results.

Communications intended for the Scientific Meetings should be addressed to

P. CHALMERS MITCHELL,
Secretary.

Zoological Society of London,
Regent's Park, London, N.W.
February 27th, 1917.

No. 165.

ABSTRACT OF THE PROCEEDINGS

OF THE

ZOOLOGICAL SOCIETY OF LONDON.*

March 6th, 1917.

Dr. S. F. Harmer, M.A., F.R.S., Vice-President, in the Chair.

The Minutes of the last Scientific Meeting were confirmed.

Dr. F. E. Beddard, M.A., D.Sc., F.R.S., F.Z.S., gave an account of his paper on the Scolex in the Cestode Genus *Duthiersia*, and on the Species of that Genus, illustrating his remarks with blackboard diagrams.

Captain S. R. Douglas, M.R.C.S., L.R.C.P., I.M.S. (retired), F.Z.S., gave an account of the results of an Experimental Investigation of the Migration of Woodcock breeding in the west of Ireland. The paper, which, among other interesting points, showed an increase in the number of Woodcock breeding in the west of Ireland, will be published in full in the 'Proceedings.'

Mr. R. I. Pocock, F.R.S., F.Z.S., gave an exhibition, illustrated by lantern-slides, to show the work done by the Beavers in the Gardens in the old enclosure on the site of the new tunnel.

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* This Abstract is published by the Society at its offices, Zoological Gardens, Regent's Park, N.W., on the Tuesday following the date of Meeting to which it refers. It will be issued, along with the 'Proceedings,' free of extra charge, to all Fellows who subscribe to the Publications; but it may be obtained on the day of publication at the price of *Sixpence*, or, if desired, sent post-free for the sum of *Six Shillings* per annum, payable in advance.

The next Meeting of the Society for Scientific Business will be held on Tuesday, March 20th, 1917, at **5.30** P.M., when the following communications will be made :—

E. PHELPS ALLIS, Junr., F.Z.S.

The Prechordal Portion of the Chondrocranium of *Chimæra colliei.*

D. M. S. WATSON, F.Z.S.

A Sketch-classification of the Pre-Jurassic Tetrapod Vertebrates.

The Publication Committee desire to call the attention of those who propose to offer Papers to the Society, to the great increase in the cost of paper and printing. This will render it necessary for the present that papers should be condensed, and be limited so far as possible to the description of new results.

Communications intended for the Scientific Meetings should be addressed to

P. CHALMERS MITCHELL,
Secretary.

ZOOLOGICAL SOCIETY OF LONDON,
REGENT'S PARK, LONDON, N.W.
March 13*th*, 1917.

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The 'Proceedings' for the year are issued in *four* parts, paged consecutively, so that the complete reference is now P. Z. S. 1917, p. . . . The Distribution is usually as follows:—

Part	I.	issued in	March.
,,	II.	,,	June.
,,	III.	,,	September.
,,	IV.	,,	December.

'Proceedings,' 1916, Part IV. (pp. 553–756), were published on December 15th, 1916.

The Abstracts of the 'Proceedings,' Nos. 163–165, are contained in this Part.

PROCEEDINGS

OF THE

GENERAL MEETINGS FOR SCIENTIFIC BUSINESS

OF THE

ZOOLOGICAL SOCIETY

OF LONDON.

1917.

Smithsonian Institution
FEB 17 1920
National Museum

PART II.

CONTAINING PAGES 105 TO 215, WITH 5 PLATES AND 25 TEXT-FIGURES.

JULY 1917.

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ZOOLOGICAL SOCIETY OF LONDON.

This Society was founded in 1826 by Sir Stamford Raffles, Mr. J. Sabine, Mr. N. A. Vigors, and other eminent Naturalists, for the advancement of Zoology and Animal Physiology, and for the introduction of new and curious subjects of the Animal Kingdom, and was incorporated by Royal Charter in 1829.

Smithsonian Institution
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National Museum

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The Society consists of Fellows, and Honorary, Foreign, and Corresponding Members, elected according to the By-Laws. It carries out the objects of its foundation by means of its collection of living animals, by its Library, and by its Scientific Publications.

The Office of the Society, Regent's Park, N.W., where all communications should be sent, addressed to "The Secretary," is open from Ten till Five, except on Saturdays, when it closes at One P.M.

The Library, under the superintendence of Mrs. Peavot, is open daily (except Sunday) from Ten A.M. till Five P.M.; on Saturdays, Ten A.M. till One P.M.

The Library is closed from Good Friday to Easter Monday, and upon all other Bank Holidays. It is also closed annually for cleaning purposes during the whole month of September.

The Meetings of the Society for General Business are held in the Meeting Room at the Society's Office on the third Wednesday of the month at 1 P.M. from November to March and at 4.30 P.M. from April to August.

The Meetings for Scientific Business are held in the Meeting Room at the Society's Office fortnightly on Tuesdays, except in July, August, September, and December and January, at half-past Five o'clock P.M.

The Anniversary Meeting is held on the 29th. of April, or the nearest convenient day, at Four P.M.

The Society's Gardens are open daily from Nine o'clock until Sunset. Mr. R. I. Pocock, F.R.S., F.L.S., is the resident Superintendent and Curator of Mammals, Mr. D. Seth-Smith is Curator of Birds and Inspector of Works, Mr. E. G. Boulenger is Curator of Reptiles, Prof. H. M. Lefroy is Curator of Insects. Applications for anatomical material or facilities for work in the Prosectorium should be addressed to the Secretary of the Society.

TERMS FOR THE ADMISSION OF FELLOWS.

Fellows pay an Admission Fee of £5, and an Annual Contribution of £3, due on the 1st. of January, and payable in advance, or a Composition of £45 in lieu thereof; the whole payment, including the Admission Fee, being £50.

No person can become a Fellow until the Admission Fee and first Annual Subscription have been paid, or the annual payments have been compounded for.

Fellows elected in November and December are not liable for the Subscription for the year in which they are elected.

PRIVILEGES OF FELLOWS.

Fellows have Personal Admission to the Gardens upon signing their names in the book at the entrance gate, and may introduce Two Companions daily.

The Wife or Husband of a Fellow can exercise these privileges in the absence of the Fellow.

Until further notice, Fellows will receive 40 undated Green Cards, available on any Sunday or week-day up to the end of February of the year following the year of issue, and 20 White Cards available on any week-day up to the same date. Twenty of the Green Cards may be exchanged for a book containing two Orders for each Sunday in the year. Twenty White Cards may be exchanged for a book of dated Week-day Orders, each Order available for any day during the week except Sunday. Special children's tickets are no longer issued, but the Green and White Cards are perforated, and each half is valid for a Child under twelve years of age. It is particularly requested that Fellows *will sign every ticket* before it goes out of their possession. Unsigned tickets are not available.

Fellows are not allowed to pass in friends on their written order or on presentation of their visiting cards.

Fellows have the privilege of receiving the Society's ordinary Publications issued during the year upon payment of the additional Subscription of One Guinea. This Subscription is due upon the 1st. of January, and must be paid before the day of the Anniversary Meeting, after which the privilege lapses. Fellows are likewise entitled to purchase these Publications at 25 per cent. less than the price charged to the public. A further reduction of 25 per cent. is also made upon all purchases of Publications issued prior to 1881, if above the value of Five Pounds.

Fellows also have the privilege of subscribing to the Annual Volume of 'The Zoological Record,' which gives a list of the Works and Publications relating to Zoology in each year, for the sum of One Pound Ten Shillings. Separate divisions of volumes 39 to 42 can also be supplied. Full particulars of these publications can be had on application to the Secretary.

Fellows may obtain a Transferable Ivory Ticket admitting two persons, available throughout the whole period of Fellowship, on payment of Ten Pounds in one sum. A second similar ticket may be obtained on payment of a further sum of Twenty Pounds.

Any Fellow who intends to be absent from the United Kingdom during the space of at least one year, may, upon giving to the Secretary notice in *writing*, have his or her name placed upon the "dormant list," and will then be called upon to pay an annual subscription of £1 only during such absence, but after three years must make a further application to be retained on that list.

Any Fellow, having paid all fees due to the Society, is at liberty to withdraw his or her name upon giving notice in *writing* to the Secretary.

Ladies or Gentlemen wishing to become Fellows of the Society are requested to communicate with "The Secretary."

P. CHALMERS MITCHELL,
Secretary.

Regent's Park, London, N.W. 8.
July, 1917.

MEETINGS

OF THE

ZOOLOGICAL SOCIETY OF LONDON

FOR

SCIENTIFIC BUSINESS.

1917.

Tuesday, October ..... 23.
„ November ..... 6 and 20.

The Chair will be taken at half-past Five o'clock precisely.

ZOOLOGICAL SOCIETY OF LONDON.

LIST OF PUBLICATIONS.

The scientific publications of the Zoological Society of London are of two kinds—"Proceedings," published in an octavo form, and "Transactions," in quarto.

According to the present arrangements, the "Proceedings" contain not only notices of all business transacted at the scientific meetings, but also all the papers read at such meetings and recommended to be published in the "Proceedings" by the Committee of Publication. A large number of coloured plates and engravings are issued in the volumes of the "Proceedings," to illustrate the new or otherwise remarkable species of animals described therein. Amongst such illustrations, figures of the new or rare species acquired in a living state for the Society's Gardens are often given.

The "Proceedings" for each year are issued in four parts, paged consecutively, during the months of March, June, September, and December. From January 1901 they have been issued as two half-yearly volumes, indexed separately.

An "Abstract of the Proceedings" is published by the Society on the Tuesday following the date of the Scientific Meeting to which it refers. It is issued along with the "Proceedings," free of extra charge, to all Fellows who subscribe to the Publications, but it may be obtained on the day of publication at the price of Sixpence, or, if desired, sent post free for the sum of Six Shillings per annum, payable in advance.

The "Transactions" contain such of the communications made to the Scientific Meetings of the Society as, on account of the nature of the plates required to illustrate them, are better adapted for publication in the quarto form. They are issued at irregular intervals.

Fellows and Corresponding Members, upon payment of a Subscription of One Guinea *before* the day of the Anniversary Meeting, are entitled to receive the Society's Publications for the year. They are likewise entitled to purchase the Publications of the Society at 25 per cent. less than the price charged to the Public. A further reduction of 25 per cent. is made upon purchases of Publications issued prior to 1881, if they exceed the value of Five Pounds.

Fellows also have the privilege of subscribing to the Zoological Record for a sum of One Pound Ten Shillings (which includes cost of delivery), payable on the 1st. of July in each year; but this privilege is forfeited unless the subscription be paid *before* the 1st of December following.

The following is a complete list of the publications of the Society already issued.

TRANSACTIONS OF THE ZOOLOGICAL SOCIETY OF LONDON.

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In consequence of a re-arrangement of the stock of the 'Transactions,' the Society is now able to offer for sale, at the reduced price of £30, sets of Vols. V.–XVI. inclusive, and separate papers, of which a list can be supplied, at about one-fourth their published price.

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Parts XVI.–XXVIII. (1848–1860). 8vo. 13 vols. (Letterpress only.) Price to Fellows : 4*s.* 6*d.* each part ; to the Public, 6*s.*

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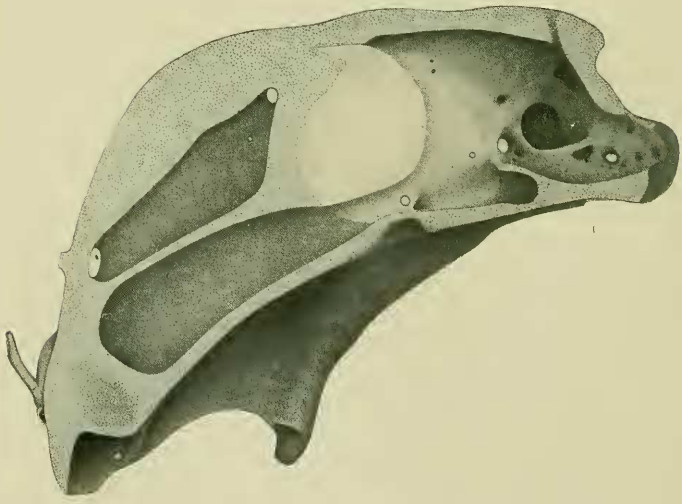

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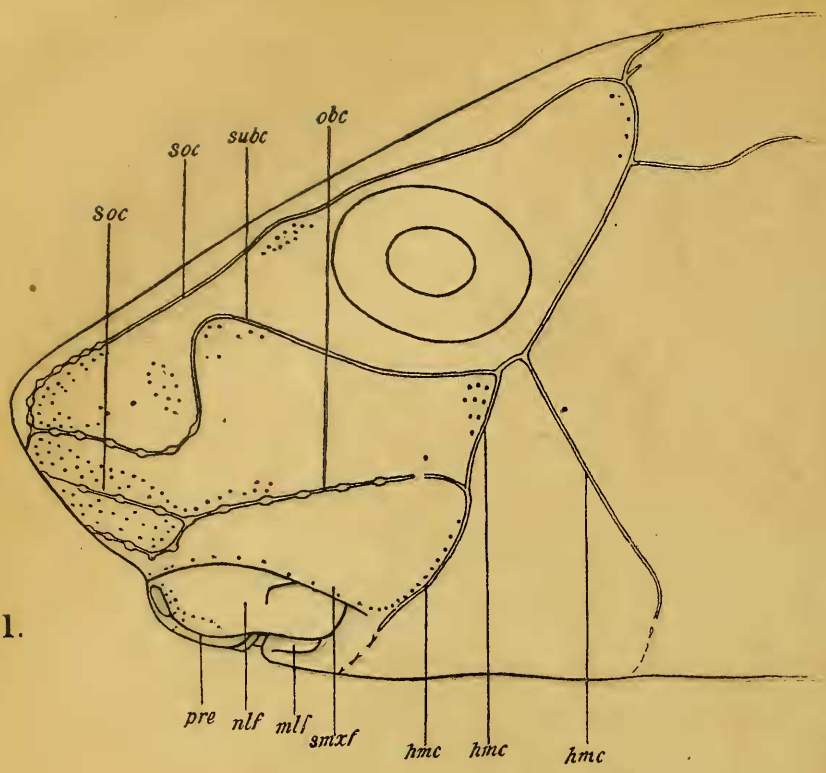

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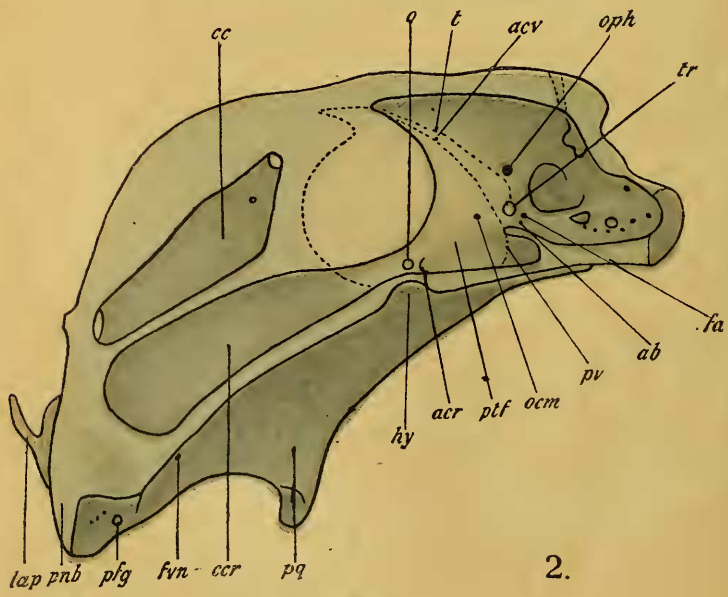

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